UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,560	03/06/2001	Hideo Uchizono	9683/81	3724

7590 12/09/2004	EXAMINER
Brinks Hofer Gilson & Lion	CLEARY, THOMAS J
PO Box 10395	
Chicago, IL 60610	

ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/786,560	UCHIZONO ET AL.
	Examiner	**Art Unit**	
	Thomas J. Cleary	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 September 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 March 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040517</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by PCT

Application Publication Number WO 99/08196 to Siddappa ("Siddappa").

3.   In reference to Claim 1, Siddappa discloses a device section including a plurality

of logical devices (See Figure 10); a USB transmitter-receiver having one or more

endpoints for sending and receiving to/from a host computer information via a universal

serial bus, said one or more endpoints being shared by a plurality of logical devices

(See Figure 10 and Page 1 Lines 31-33); a controller which, on the basis of information

from said host computer designating a desired logical device in said device section,

selects one or more endpoints required for sending and receiving information between

said logical device and said host computer from the endpoints within said USB

transmitter-receiver and connects said one or more endpoints with said logical device

(See Figure 10, Page 1 Lines 27-36, and Page 2 Lines 5-19).

4.   Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sharp IrDA

Application Note 'Implementing an IrDA Control Peripheral' ("Sharp").

5.   In reference to Claim 1, Sharp discloses a device section including a plurality of

logical devices (See Page 7 Paragraph 7); a USB transmitter-receiver having one or

more endpoints for sending and receiving to/from a host computer information via a

universal serial bus, said one or more endpoints being shared by said plurality of logical

devices (See Page 7 Paragraph 1); a controller which, on the basis of information from

said host computer designating a desired logical device in said device section, selects

one or more endpoints required for sending and receiving information between said

logical device and said host computer from the endpoints within said USB transmitter-

receiver and connects said one or more endpoints with said logical device (See Page 7

Paragraphs 2-7).

6.   Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Universal

Serial Bus Specification Revision 1.0 ("USB Specification").

7.   In reference to Claim 1, the USB Specification discloses a device section

including a plurality of logical devices (See Page 45 Figure 5-8); a USB transmitter-

receiver having one or more endpoints for sending and receiving information to/from a

host computer via a universal serial bus, said one or more endpoints being shared by a

plurality of logical devices (See Page 45 Figure 5-8); a controller which, on the basis of

information from said host computer designating a desired logical device in said device

section, selects one or more endpoints required for sending and receiving information

between said logical device and said host computer from the endpoints within said USB

transmitter-receiver and connects said endpoint to said logical device (See Page 45

Figure 5-8).

8.   In reference to Claim 2, the USB Specification discloses the limitations as in

Claim 1 above. The USB Specification further discloses that said USB transmitter-

receiver includes an endpoint for a control transfer (See Page 45 Figure 5-8 and Page

47 Section 5.3.1.2); and wherein said controller receives, from said host computer,

information specifying a desired logical device via said endpoint for a control transfer,

and connects one or more endpoints selected from said one or more endpoints of said

USB transmitter-receiver to said logical device (See Page 45 Figure 5-8 and Page 50

Section 5.5).

9.   In reference to Claim 3, the USB Specification discloses the limitations as in

Claim 1 above. The USB Specification further discloses that said USB transmitter-

receiver includes an endpoint for a control transfer (See Page 45 Figure 5-8 and Page

47 Section 5.3.1.2); and wherein said controller receives, from said host computer,

information specifying a desired service via said endpoint for a control transfer, and

connects one or more endpoints selected from said one or more endpoints of said USB

transmitter-receiver to a logical device corresponding to said service (See Page 45

Figure 5-8 and Page 50 Section 5.5).

10.   In reference to Claim 4, the USB Specification discloses the limitations as in

Claim 1 above. The USB Specification further discloses that said USB transmitter-

receiver performs an control transfer with said host computer via an endpoint for a

control in said USB transmitter-receiver, thereby setting a function of an endpoint used

in sending and receiving information between said logical device and said host

computer (See Pages 153-154 Section 8.5.2 and Pages 50-54 Sections 5.5-5.5.5).

11.   In reference to Claim 5, the USB Specification discloses the limitations as in

Claim 1 above. The USB Specification further discloses that said USB transmitter-

receiver has a plurality of interfaces formed by one or more endpoints and one of these

interfaces includes and endpoint for a control transfer (See Page 45 Figure 5-8 and

Page 47 Section 5.3.1.2); wherein said controller receives information specifying said

desired logical device from said host computer via said endpoint for a control transfer,

selects an interface required for sending and receiving information with said host

computer from among the interfaces for said USB transmitter-receiver, and connects

said interface with said logical device (See Page 45 Figure 5-8 and Page 50 Section

5.5).

12.   In reference to Claim 6, the USB Specification discloses the limitations as in
Claim 1 above. The USB Specification further discloses that said USB transmitter-
receiver has an endpoint for a control transfer and a plurality of interface blocks
corresponding to a plurality of ports, and each interface block has a plurality of
interfaces formed by one or a plurality of endpoints (See Page 45 Figure 5-8); and
wherein, when said host computer receives a desired service via a desired port, said
controller receives information specifying said desired service from said host computer
via said endpoint for a control transfer, and connects an interface block corresponding
to said port within said USB transmitter-receiver to a logical device corresponding to
said service (See Page 45 Figure 5-8 and Page 45 Figure 5-8 and Page 50 Section
5.5).

13.   In reference to Claim 7, the USB Specification discloses the limitations as in
Claim 6 above. The USB Specification further discloses that said host computer
requests to receive a different service from another port while using said logical device
via said port, said controller connects an interface block corresponding to said another
port to a logical device corresponding to said different service (See Pages 30-31
Section 4.4).

14.   In reference to Claim 8, the USB Specification discloses the limitations as in
Claim 1 above. The USB Specification further discloses that said USB transmitter-

receiver has a plurality of interface blocks corresponding to a plurality of ports, each

said interface block has a plurality of interfaces each formed by one or a plurality of

endpoints, and one interface of said interfaces includes an endpoint for control transfer

(See Page 45 Figure 5-8 and Page 47 Section 5.3.1.2); and wherein, when said host

computer receives a desired service via a desired port, said controller receives, from

said host computer, information specifying said desired service via said control transfer

endpoint, which is included in an interface block corresponding to said desired port in

said USB transmitter-receiver, and connects a logical device corresponding to said

service to an interface block corresponding to said port within said USB transmitter-

receiver (See Page 45 Figure 5-8 and Page 50 Section 5.5).

15.   Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by US

Patent Number 6,122,676 to Brief et al. ("Brief").

16.   In reference to Claim 1, Brief discloses a device section including a plurality of

logical devices (See Figure 1 Numbers 124 and 126, Column 1 Lines 39-46, and

Column 4 Lines 11-13); a USB transmitter-receiver having one or more endpoints for

sending and receiving information to/from a host computer via a universal serial bus,

said one or more endpoints being shared by a plurality of logical devices (See Column 2

Line 49 – Column 3 Line 24 and Column 6 Lines 61-67); a controller which, on the basis

of information from said host computer designating a desired logical device in said

device section, selects one or more endpoints required for sending and receiving

information between said logical device and said host computer from the endpoints

within said USB transmitter-receiver and connects said endpoint to said logical device

(See Column 6 Line 28 – Column 7 Line 12).

17.   In reference to Claim 2, Brief discloses the limitations as in Claim 1 above. Brief

further discloses that said USB transmitter-receiver includes an endpoint for a control

transfer (See Column 8 Lines 25-27); and wherein said controller receives, from said

host computer, information specifying a desired logical device via said endpoint for a

control transfer, and connects one or more endpoints selected from said one or more

endpoints of said USB transmitter-receiver to said logical device (See Column 7 Lines

1-8).

18.   In reference to Claim 3, Brief discloses the limitations as in Claim 1 above. Brief

further discloses that said USB transmitter-receiver includes an endpoint for a control

transfer (See Column 8 Lines 25-27); and wherein said controller receives, from said

host computer, information specifying a desired service via said endpoint for a control

transfer, and connects one or more endpoints selected from said one or more endpoints

of said USB transmitter-receiver to a logical device corresponding to said service (See

Column 6 Lines 59-67, Column 7 Lines 1-8, and Column 8 Lines 51-59).

19.   In reference to Claim 4, Brief discloses the limitations as in Claim 1 above. Brief

further discloses that said USB transmitter-receiver performs an control transfer with

said host computer via an endpoint for a control in said USB transmitter-receiver, thereby setting a function of an endpoint used in sending and receiving information between said logical device and said host computer (See Column 8 Lines 25-27).

20.   In reference to Claim 5, Brief discloses the limitations as in Claim 1 above. Brief further discloses that said USB transmitter-receiver has a plurality of interfaces formed by one or more endpoints and one of these interfaces includes and endpoint for a control transfer (See Figure 1, Column 1 Lines 20-37, Column 6 Lines 59-67, and Column 8 Lines 25-27); wherein said controller receives information specifying said desired logical device from said host computer via said endpoint for a control transfer, selects an interface required for sending and receiving information with said host computer from among the interfaces for said USB transmitter-receiver, and connects said interface with said logical device (See Column 7 Lines 13-28 and Column 8 Lines 25-27).

21.   In reference to Claim 6, Brief discloses the limitations as in Claim 1 above. Brief further discloses that said USB transmitter-receiver has an endpoint for a control transfer (See Column 8 Lines 25-27) and a plurality of interface blocks corresponding to a plurality of ports, and each interface block has a plurality of interfaces formed by one or a plurality of endpoints (See Figure 1 and Column 1 Lines 20-37); and wherein, when said host computer receives a desired service via a desired port, said controller receives information specifying said desired service from said host computer via said

endpoint for a control transfer, and connects an interface block corresponding to said

port within said USB transmitter-receiver to a logical device corresponding to said

service (See Column 6 Lines 59-67).

22.   In reference to Claim 7, Brief discloses the limitations as in Claim 6 above. Brief

further discloses that said host computer requests to receive a different service from

another port while using said logical device via said port, said controller connects an

interface block corresponding to said another port to a logical device corresponding to

said different service (See Column 8 Lines 15-19).

23.   In reference to Claim 8, Brief discloses the limitations as in Claim 1 above. Brief

further discloses that said USB transmitter-receiver has a plurality of interface blocks

corresponding to a plurality of ports, each said interface block has a plurality of

interfaces each formed by one or a plurality of endpoints, and one interface of said

interfaces includes an endpoint for control transfer (See Figure 1, Column 1 Lines 20-

37, Column 6 Lines 59-67, and Column 8 Lines 25-27); and wherein, when said host

computer receives a desired service via a desired port, said controller receives, from

said host computer, information specifying said desired service via said control transfer

endpoint, which is included in an interface block corresponding to said desired port in

said USB transmitter-receiver, and connects a logical device corresponding to said

service to an interface block corresponding to said port within said USB transmitter-

receiver (See Column 7 Lines 13-28 and Column 8 Lines 25-27).

24.   In reference to Claim 9, Brief discloses a plurality of logical devices that provide

different functionalities and are all recognizable under one USB address by the host

computer (See Figure 1 Numbers 124 and 126, Column 1 Lines 39-46, and Column 4

Lines 11-13); a USB that comprises multiple endpoints which collectively provide

multiple data transfer functionalities (See Column 2 Line 49 – Column 3 Line 24) and at

least some of which are reconfigurable to provide different data communication

capabilities for the logical devices (See Column 4 Line 39 – Column 5 Line 7); a device

selector that, in response to a service request from the host computer, dynamically

connects one or more endpoints to a logical device adapted to provide the requested

service (See Column 6 Line 28 – Column 7 Line 12); and an endpoint configurator that

reconfigures, if necessary, some of the one or more endpoints to effect data

communication between the host computer and the selected logical device (See

Column 7 Line 13 – Column 8 Line 36).

25.   In reference to Claim 10, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the logical devices comprise a printer and a packet

communication device (See Column 1 Lines 14-20).

26.   In reference to Claim 11, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the endpoints comprise an endpoint for control

transfer through which at a setup stage, configurations of the logical devices are

informed to the host computer by the mobile device (See Column 8 Lines 25-27).

27.   In reference to Claim 12, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the service request from the host computer

comprises an identification of a service desired by the host computer (See Column 6

Lines 59-67, Column 7 Lines 1-8, and Column 8 Lines 51-59).

28.   In reference to Claim 13, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the service request from the host computer

comprises an identification of a logical device that provides the requested service (See

Column 7 Lines 1-8).

29.   In reference to Claim 14, Brief discloses the limitations as applied to Claim 13

above. Brief further discloses that the controller determines, in response to the service

request from the host computer whether or not the requested logical device is available

to serve the host computer (See Column 6 Lines 37-49 and Column 8 Lines 42-50).

30.   In reference to Claim 15, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the endpoint configurator reconfigures the endpoints

at a request from the host computer (See Column 6 Line 61 - Column 7 Line 12).

31.   In reference to Claim 16, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the USB comprises a plurality of USB blocks each

connected to the host computer through an assigned port (See Figure 1 and Column 1

Lines 20-37) and each connectable to any of the logical devices through an assigned

logical device selector (See Column 6 Lines 59-67).

32.   In reference to Claim 17, Brief discloses the limitations as applied to Claim 9

above. Brief further discloses that the one of the endpoints is adapted specifically for

control transfer between the host computer and a controller of the mobile device (See

Column 8 Lines 25-27).

33.   In reference to Claim 18, Brief discloses a providing a mobile device with a

plurality of logical devices that provide different functionalities and are all recognizable

under one USB address by the host computer, wherein the mobile device is connected

to the host computer (See Figure 1 Numbers 124 and 126, Column 1 Lines 39-46, and

Column 4 Lines 11-13); notifying the host computer of configurations of the logical

devices through a USB that comprises multiple endpoints which collectively provide

multiple data transfer functionalities (See Column 2 Line 49 – Column 3 Line 24) and at

least some of which are reconfigurable to provide different data communication

capabilities for the logical devices (See Column 4 Line 39 – Column 5 Line 7); receiving

a service request from the host computer through the USB (See Column 6 Lines 59-67,

Column 7 Lines 1-8, and Column 8 Lines 51-59); dynamically connecting one or more

endpoints to a logical device adapted to provide the requested service (See Column 6
Line 28 – Column 7 Line 12); and reconfiguring, if necessary, some of the one or more
endpoints to effect data communication between the host computer and the selected
logical device (See Column 7 Line 13 – Column 8 Line 36).

34.   In reference to Claim 19, Brief discloses the limitations as applied to Claim 18
above. Brief further discloses that the logical devices comprise a printer and a packet
communication device (See Column 1 Lines 14-20).

35.   In reference to Claim 20, Brief discloses the limitations as applied to Claim 18
above. Brief further discloses that the service request from the host computer
comprises an identification of a service desired by the host computer (See Column 6
Lines 59-67, Column 7 Lines 1-8, and Column 8 Lines 51-59).

36.   In reference to Claim 21, Brief discloses the limitations as applied to Claim 18
above. Brief further discloses that the service request from the host computer
comprises an identification of a logical device that provides the requested service (See
Column 7 Lines 1-8).

37.   In reference to Claim 22, Brief discloses the limitations as applied to Claim 21
above. Brief further discloses that the controller determines, in response to the service

request from the host computer, whether or not the requested logical device is available

to serve the host computer (See Column 6 Lines 37-49 and Column 8 Lines 42-50).

38.   In reference to Claim 23, Brief discloses the limitations as applied to Claim 18

above. Brief further discloses that reconfiguring one or more endpoints comprises

reconfiguring one or more endpoints at a request from the host computer (See Column

6 Line 61 - Column 7 Line 12).

Claim Rejections - 35 USC § 112

39.   Claims 9-17 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Claims 9-17 recite the term "configurator" on Line 11

of Claim 9. This term is not commonly known in the art nor is a definition provided in

the specification.

Response to Amendment

40.   Applicant is reminded that when amendments to a claim are made, the text of

any added subject matter must be shown by underlining the added text (See 37 CFR

§1.121(c)(2)).

Response to Arguments

41.   Applicant's arguments filed 22 September 2004 with respect to Claims 1-8 have been fully considered but are moot in view of the new ground(s) of rejection. Applicant has modified the scope of the claims to include "said one or more endpoints being shared by said plurality of logical devices. As shown above, such changes are not persuasive to overcome a rejection based on 35 USC §102.

42.   In response to Applicant's arguments that Siddappa and the USB Specification do not disclose sharing endpoints, the Examiner notes that in both Siddappa and the USB Specification, a plurality of devices share a plurality of endpoints, as shown above.

43.   In response to Applicant's argument that the references fail to show certain features of Applicant's invention, it is noted that the features upon which applicant relies (i.e., a dynamic connection of endpoints) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

44.   In response to Applicant's argument that Sharp cannot achieve the miniaturization of the device that the present invention can, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed

invention and the prior art in order to patentably distinguish the claimed invention from

the prior art. If the prior art structure is capable of performing the intended use, then it

meets the claim. In a claim drawn to a process of making, the intended use must result

in a manipulative difference as compared to the prior art. See *In re Casey*, 152

USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Further,

the Examiner can find nothing in Sharp prohibiting miniaturization, as stated by the

Applicant.

Conclusion

45.   The following art made of record and not relied upon is considered pertinent to

applicant's disclosure: "USB Feature Specification: Shared Endpoints."

Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Thomas J. Cleary whose telephone number is 571-272-

3624. The Examiner can normally be reached on Monday-Thursday (7-4), Alt. Fridays

(7-3).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Mark H. Rinehart can be reached on 571-272-3632. The fax phone number

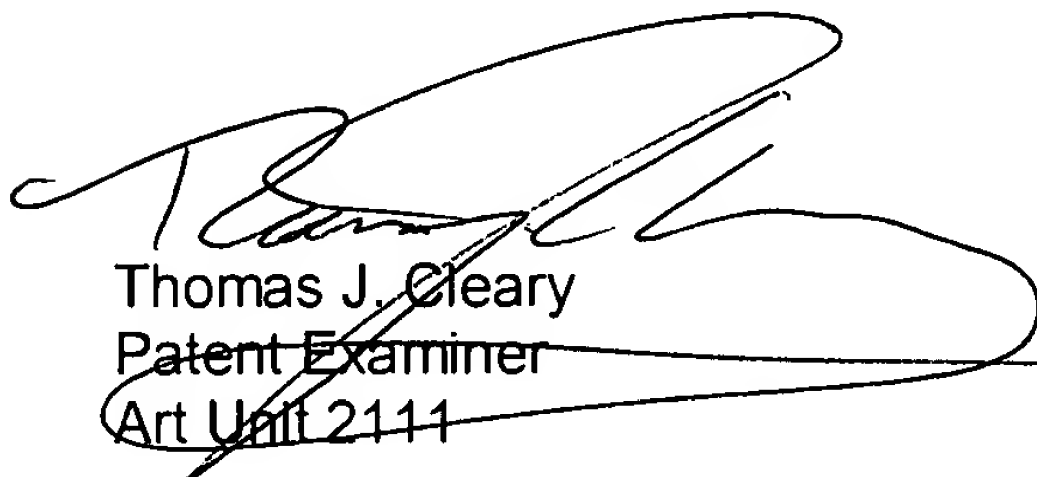for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

TJC

Thomas J. Cleary
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